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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/936,007	09/07/2001	Sang-Young Lee	B-4309PCT 619079-8	7861

7590 12/03/2003

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EXAMINER

BELL, BRUCE F

ART UNIT	PAPER NUMBER
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1746

DATE MAILED: 12/03/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/936,007

Applicant(s)

LEE ET AL.

Examiner

Bruce F. Bell

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-21 is/are allowed.
- 6) ☒ Claim(s) 1,3,4 and 7 is/are rejected.
- 7) ☒ Claim(s) 2,5,6,9 and 10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 8 and 11 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim.

Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

2. Claims 8 and 11 do not appear to further limit the apparatus structure of the high crystalline polypropylene separator since the claims merely attach an electrolyte to the sides of the separator. The electrolyte in a lithium ion battery is not a part of the separator, but instead is a part of the lithium ion battery assembly. Therefore, it appears that applicants' are attempting to claim the separator assembly for use in the battery instead of just the separator as instantly set forth in the claim.

### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 3, 4 and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Zimmerman (3801692).

Zimmerman disclose a crystalline polypropylene having a density of 0.92 g/cm<sup>3</sup> and having a crystallinity of about 60 percent. The patent teaches the preparation

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of the crystalline polypropylene wherein the sample film is oven annealed with air with slight tension at 140 degrees Centigrade for about 10 minutes and allowed to cool. The annealed film is then cold stretched and then hot stretched until the film is drawn 100% based on the original length of the film. The film is then heat set under tension at constant length at 140 degrees centigrade for 10 min in air. See col. 7, line 47 – col. 8, line 75.

Zimmerman as set forth above anticipates the applicants' instant invention as set forth above. Even though the prior art says that the film is a crystalline polypropylene microporous film but does not state that it is a membrane or separator, does not negate that the structure is the same and therefore, inherently has the same properties and structure. Giving a new name to an existing structure does not make the structure patentable by simply giving the film a new name such as a separator or membrane. A film in fact can be both of these structures, therefore the instant invention as set forth is not considered novel.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

4. Claims 1, 4, 7 are rejected under 35 U.S.C. 102(a) as being anticipated by Demeuse (6232402)

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Demeuse discloses an isotactic polypropylene having a high crystallinity of at least 93% and preferably of at least about 95%. See col. 4, lines 13-45.

***Allowable Subject Matter***

5. Claims 2, 5, 6, 9, 10, 12-21 are allowable over the prior art of record.
6. Claims 2, 5, 6, 9, 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
7. The following is a statement of reasons for the indication of allowable subject matter:
8. The prior art of record fails to teach and/or suggest a high crystalline polypropylene micro-porous membrane or separator having an air permeability of 500 sec/100 cc or less. Further, the prior art fails to teach the multi-component micro-porous membrane and process of preparing the membrane having the components as set forth in the instant claims.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Bruce F. Bell whose telephone number is 703-308-2527. The examiner can normally be reached on Monday-Friday 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Randy Gulakowski can be reached on 703-308-4333. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

BFB  
December 1, 2003

  
Bruce F. Bell  
Primary Examiner  
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